

In The Claims:

Claim 1. (original) An organic light-emitting diode, comprising:

a transparent substrate;

an anode disposed on the transparent substrate;

at least one organic functional layer disposed on the anode;

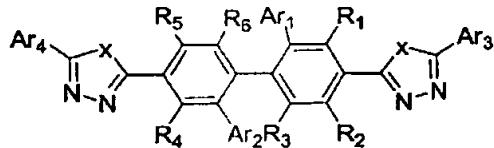
a cathode disposed on the organic functional layer; and

a metal doped layer disposed between the cathode and the organic functional layer,

wherein the metal doped layer comprises an organic compound represented by a formula (1)

doped with a metal:

(1)



wherein R₁~R₆ are a hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted alkyloxy, substituted or unsubstituted alkenyl, substituted or unsubstituted amino, substituted or unsubstituted aromatic hydroxyl, substituted or unsubstituted polycyclic aromatic or substituted or unsubstituted aromatic alkyl; Ar₁~Ar₄ are substituted or unsubstituted aromatic hydroxyl, substituted or unsubstituted polycyclic aromatic, substituted or unsubstituted aromatic alkyl or substituted or unsubstituted aromatic heterocyclic; X is oxygen, sulfur, substituted or unsubstituted amino, or substituted or unsubstituted silane.

Claim 2. (original) The organic light-emitting diode of claim 1, wherein one substitute of the functional groups is halogen, cyano or nitro.

Claim 3. (original) The organic light-emitting diode of claim 1, wherein a glass transition temperature is higher than 100 °C.

Claim 4. (original) The organic light-emitting diode of claim 1, wherein the organic compound is alkali metal, alkaline-earth metal or transition metal.

Claim 5. (original) The organic light-emitting diode of claim 4, wherein the alkali metal is Li, Na, K, Rb or Cs.

Claim 6. (original) The organic light-emitting diode of claim 4, wherein the alkaline-earth metal is Be, Mg, Ca, Sr or Ba.

Claim 7. (original) The organic light-emitting diode of claim 4, wherein the transition metal is Y, La, Sm or U.

Claim 8. (original) The organic light-emitting diode of claim 1, wherein a work function of the metal is no more than 4.5eV.

Claim 9. (original) The organic light-emitting diode of claim 1, wherein the metal doped within the organic compound is 0.5%~10%.

Claim 10. (original) The organic light-emitting diode of claim 9, wherein the metal doped within the organic compound is preferred 1%~3%.

Claim 11. (original) The organic light-emitting diode of claim 1, wherein the metal doped layer has a thickness from about 0.5nm to about 100nm.

Claims 12-21 (canceled)